

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Daniel Brian Tan                      Examiner: Patterson  
Serial No.: 10/644,435                      Group Art Unit: 1772  
Filed: August 19, 2003                      Confirmation No.: 6982  
Title: SELF OPENING BAG STACK AND METHOD OF MAKING SAME

**APPEAL BRIEF**

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**(1) REAL PARTY IN INTEREST**

The real party in interest is the Applicant, Daniel Brian Tan.

**(2) RELATED APPEALS AND INTERFERENCES**

There are no related appeals or interferences.

**(3) STATUS OF CLAIMS.**

Claims 1, 4-7, 9-23, 26-29 and 31-42 are finally rejected as being unpatentable over Huang et al. (US Patent No. 6,435,350) in view of Williams (US Patent No. 5,078,667) and Harris (US Patent No. 6,822,051 B2) under 35 USC 103(a).

Claims 2-3 and 24 -25 are rejected as being unpatentable over Huang et al. (US Patent No. 6,435,350) in view of Williams (US Patent No. 5,078,667) and Harris (US Patent No. 6,822,051 B2) and further in view of Mawson et al. (US Patent Publication No. 2002/0107342) under 35 USC 103(a).

Claims 8 and 30 have been cancelled.

**(4) STATUS OF AMENDMENTS**

No amendments were filed subsequent to final rejection.

**(5) SUMMARY OF CLAIMED SUBJECT MATTER**

Claim 1 claims a self-opening bag stack **10**, constructed as follows. A plurality of stacked polyethylene film bags **15** formulated from about 40-48 wt. % high density, high molecular weight polyethylene, 12-20 wt. % high density, medium molecular weight polyethylene, 20-30 wt. % linear low density polyethylene, having a melt index ranging from .10-.30 gm/10 minutes and 0-8 wt. % color concentrate are releasably adhered together in substantial registration. Each of the bags **15** includes front **20** and rear **25** polyethylene film walls. Each of the front **20** and rear **25** walls have first **30** and second **35** side edges, a top edge **40** and a bottom edge **45**. The front **20** and rear **25** walls are integrally joined at their first **30** and second **35** side edges and secured together at their bottom edges **45**. An open mouth portion **50** is defined adjacent the top edges **40** of the bags **15**. At least an upper portion **55** of an outer surface **60** of the front **20** and rear **25** walls of each of the bags **15** has been corona treated. See **Figure 1** and page 11, lines 9-20 and page 12, lines 13-14.

Claim 2 claims inclusion of 0.5 wt. % slip and antiblock compound in the self-opening bag stack **10**. See page 11, lines 21-22.

Claim 3 claims inclusion of 1-3 wt. % calcium carbonate in the self-opening bag stack **10**. See page 12, lines 1-2.

Claim 4 claims inclusion of 10-20 wt. % recycled material in the self-opening bag stack **10**, the recycled material comprising about 40-48 wt. % high density, high molecular weight polyethylene, 12-20 wt. % high density, medium molecular weight polyethylene, 20-30 wt. % linear low density polyethylene, 0-8 wt. % color concentrate. See page 12, lines 3-6.

Claim 5 claims that 10-15 wt. % of the linear low density polyethylene has a density ranging from .923-.924 gm/cc. See page 12, lines 7-8.

Claim 6 claims that 10-15 wt. % of said linear low density polyethylene has a melt index ranging from .25-.30 gm/10 minutes. See page 12, lines 9-10.

Claim 7 claims that the high density, medium molecular weight polyethylene has a density ranging from .937-.947 gm/cc. See page 12, lines 11-12.

Claim 9 claims that at least one cold staking area **65** pierces and extends transversely through the bag stack **10** for maintaining the bags **15** in the bag stack **10** in substantial registration. See **Figures 1 and 2** and page 12, lines 15-17.

Claim 10 claims that at least one hot melt pin area **70** pierces and extends transversely through the bag stack **10** for maintaining the bags **15** in the bag stack **10** in substantial registration. See **Figures 1 and 2** and page 12, lines 18-20.

Claim 11 claims that each of the bags **15** includes longitudinally oriented side gussets **75**. See **Figures 1, 2, and 3** and page 12, lines 21-22.

Claim 12 claims that the self-opening bag stack **10** has first **77** and second **78** openings. The first **77** and second **78** openings penetrate and extend transversely through the bag stack **10** in the upper portion **55** of the bags **15**. The openings **77, 78** are spaced downwardly from the top edge **40** and spaced inwardly from the first **30** and second **35** side edges and serves to support the bag stack **10** on horizontal arms **130** of a dispensing rack **135**. See **Figures 1, 4 and 5**, and page 13, lines 1-6.

Claim 13 claims that each of the bags **15** of the bag stack **10** includes an upper seam **80**. The upper seam **80** seals the front wall **20** to the rear wall **25** at their respective top edges **40**. A

U-shaped cut-out **85** is provided. The U-shaped cut-out **85** is located in an upper portion **90** of the bag **15** and begins at a first point **95** along the upper seam **80**. The first point **95** is spaced inwardly from the first side edge **30** and extends to a second point **100** along the upper seam **80**. The second point **100** is spaced inwardly from the second side edge **35**. The cut-out **85** extends downwardly toward the bottom edges **45**, thereby forming the an open mouth portion **50** and a pair of bag handles **110**. See **Figures 2, 3, 4 and 5**, and page 13, lines 8-15.

Claim 14 claims that first **115** and second **120** openings are provided. The first **115** and second **120** openings penetrate and extend transversely through the bag stack **10** in an upper portion **125** of the bag handles **110**. The openings **115, 120** are spaced downwardly from the upper seam **80** and serve to support the bag stack **10** on horizontal arms **130** of a dispensing rack **135**. See **Figures 2, 3, 4, and 5**, and page 13, lines 16-20.

Claim 15 claims that at least one cold staking area **65** pierces and extends transversely through the bag stack **10** in the bag handles **110** for maintaining the bags **15** in the bag stack **10** in substantial registration. See **Figure 2**, and page 13, lines 21-23.

Claim 16 claims that at least one hot melt pin area **70** pierces and extends transversely through the bag stack **10** in the bag handles **110** for maintaining the bags **15** in the bag stack **10** in substantial registration. See **Figure 2**

Claim 17 claims that a central tab portion **140** is connected to the open mouth portion **50** of the bags **15** in the bag stack **10**. An aperture is provided **150**. The aperture **150** extends transversely through the bag stack **10** within the central tab portion **140** for suspending the bag stack **10** from a dispensing member **155**. See **Figures 2, 3, 4, and 5**

Claim 18 claims that at least one cold staking area **65** pierces and extends transversely

through the bag stack **10** in the central tab portion **140** for maintaining the bags **15** in the bag stack **10** in substantial registration. See **Figure 2**

Claim 19 claims that at least one hot melt pin area **70** pierces and extends transversely through the bag stack **10** in the central tab portion **140** for maintaining the bags in the bag stack **10** in substantial registration. See **Figure 2**

Claim 20 claims that the central tab portion **140** of each bag **15** in the bag stack **10** is detachably connected to the open mouth portion **50** of the bags **15**. See **Figure 2**

Claim 21 claims that the central tab portion **140** of each bag **15** in the bag stack **10** includes a frangible section **160**. The frangible section **160** extends from the aperture **150** to an outer edge **165** of the central tab portion **140**. The frangible section **160** ruptures upon removal of the bag **15** from the dispensing member **155**. See **Figure 3**

Claim 22 claims that the degree of corona treatment on the outer surfaces **60** of the front **20** and rear **25** walls of each of the bags **15** is an amount sufficient to result in a surface tension on the corona treated surface **60** of at least about 38 dynes/cm.

Claim 23 claims a self-opening bag stack **10** of t-shirt type bags **170** including a plurality of stacked polyethylene film bags **170** formulated from about 40-48 wt. % high density, high molecular weight polyethylene, 12-20 wt. % high density, medium molecular weight polyethylene having a melt index ranging from .10-.30 gm/10 minutes, and 20-30 wt. % linear low density polyethylene, 0-8 wt. % color concentrate. The bags **170** are releasably adhered together in substantial registration. Each of the bags **170** includes front **20** and rear **25** polyethylene film walls. Each of the front **20** and rear **25** walls have first **30** and second **35** side edges, a top edge **40** and a bottom edge **45**. The front **20** and rear **25** walls are integrally joined

at their first **30** and second **35** side edges and secured together at their bottom edges **45**. An open mouth portion **50** is defined adjacent the top edges **40**. Each of the bags **170** includes laterally spaced upwardly extending bag handles **110**, an open mouth portion **50** between the handles **110** and a central support tab portion **140** extending upwardly from the open mouth portion **50**. At least an upper portion **55** of the outer surface **60** of the front **20** and rear **25** walls of each of the bags **170** having been corona treated.

Claim 24 claims that the self-opening bag stack **10** includes 0.5 wt. % slip and antiblock compound.

Claim 25 claims that, the self-opening bag stack **10** includes 1-3 wt. % calcium carbonate.

Claim 26 claims that the self-opening bag stack **10** includes 10-20 wt. % recycled material, the recycled material comprising about 40-48 wt. % high density, high molecular weight polyethylene, 12-20 wt. % high density, medium molecular weight polyethylene, 20-30 wt. % linear low density polyethylene, 0-8 wt. % color concentrate.

Claim 27 claims that 10-15 wt. % of the linear low density polyethylene has a density ranging from .923-.924 gm/cc.

Claim 28 claims that 10-15 wt. % of said linear low density polyethylene has a melt index ranging from .25-.30 gm/10 minutes.

Claim 29 claims that the high density, medium molecular weight polyethylene has a density ranging from .937-.947 gm/cc.

Claim 31 claims that at least one cold staking area **65** pierces and extends transversely through the bag stack **10** for maintaining the bags **15** in the bag stack **10** in substantial

registration. See **Figure 2**

Claim 32 claims that at least one hot melt pin area **70** pierces and extends transversely through the bag stack **10** for maintaining the bags **170** in the bag stack **10** in substantial registration. See **Figure 2**

Claim 33 claims that each of the bags **170** includes longitudinally oriented side gussets **75**. See **Figures 1, 2 and 3**

Claim 34 claims that first **115** and second **120** openings are provided. The first **115** and second **120** openings penetrate and extend transversely through the bag stack **10** in an upper portion **125** of the bag handles **110**. The openings **115,120** are spaced downwardly from the upper seam **80** and serving to support the bag stack **10** on horizontal arms **130** of the dispensing rack **135**. See **Figures 2 and 3**

Claim 35 claims at least one cold staking area **65** pierces and extends transversely through the bag stack **10** in the bag handles **110** for maintaining the bags **170** in the bag stack **10** in substantial registration. See **Figures 2 and 3**

Claim 36 claims that at least one hot melt pin area **70** pierces and extends transversely through the bag stack **10** in the bag handles **110** for maintaining the bags **170** in the bag stack **10** in substantial registration. See **Figures 2 and 3**

Claim 37 claims that an aperture **150** is provided. The aperture **150** extends transversely through the bag stack **10** within the central tab portion **140** for suspending the bag stack **10** from a dispensing member **155**. See **Figures 3, 4, and 5**

Claim 38 claims that at least one cold staking area **65** pierces and extends transversely through the bag stack **10** in the central tab portion **140** for maintaining the bags **170** in the bag

stack **10** in substantial registration. See **Figure 2**

Claim 39 claims that at least one hot melt pin area **70** pierces and extends transversely through the bag stack **10** in the central tab portion **140** for maintaining the bags **170** in the bag stack **10** in substantial registration. See **Figure 2**

Claim 40 claims that the central tab portion **140** of each bag **170** in the bag stack **10** is detachably connected to the open mouth portion **50** of the bags **15**. See Figure 2

Claim 41 claims that the central tab portion **140** of each bag **170** in the bag stack **10** includes a frangible section **160**. The frangible section **160** extends from the aperture **150** to an outer edge **165** of the central tab portion **140**. The frangible portion **160** ruptures upon removal of the bag **170** from the dispensing member **155**. See **Figure 3**

Claim 42 claims that the degree of corona treatment on the outer surfaces **60** of the front **20** and rear **25** walls of each of the bags **170** is an amount sufficient to result in a surface tension on the corona treated surface **60** of at least about 38 dynes/cm.

**(6) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**A. Claim Rejections -35 USC § 103

The Examiner finally rejected Claims 1, 4 -7, 9 -23, 26-29 and 31-42 under 35 U.S.C103(a) as being unpatentable over Huang et al (US Patent No. 6,435,350) in view of Williams (US Patent No. 5,078,667) and Harris (US Patent No. 6,822,051 B2), of record on page 2 of the previous Action.

The Examiner finally rejected Claims 2 -3 and 24 -25 under 35 USC 103(a) as being unpatentable over Huang et al (US Patent No. 6,435,350) in view of Williams (US Patent No. 5,078,667) and Harris (US Patent No. 6,822,051 B2) and further in view of Mawson et al (US Patent Publication No. 2002/0107342), of record on page 2 of the previous Action.

C. Response to Applicant's Arguments

The Examiner was not persuaded by Applicant's arguments regarding the 35 USC 103(a) rejection of Claims 1 ,4 -7, 9 -23, 26 -29 and 31-42 as being unpatentable over Huang et al (US Patent No. 6,435,350) in view of Williams (US Patent No. 5,078,667) and Harris (US. Patent No. 6,822,051 B2); and the 35 USC 103(a) rejection of Claims 2-3 and 24-25 as being unpatentable over Huang et al (US Patent No. 6,435,350) in view of Williams (US Patent No. 5,078,667) and Harris (US Patent No. 6,822,051 B2) and further in view of Mawson et al (US Patent Publication No. 2002/0107342), of record in the previous Action.

**(7) ARGUMENTS**A. Claim Rejections -35 U.S.C. § 103

In resolving the question of obviousness under 35 U.S.C. § 103, we presume full knowledge by the inventor of all the prior art in the field of his endeavor. However, with regard to prior art outside the field of his endeavor, we only presume knowledge from those arts reasonably pertinent to the particular problem with which the inventor was involved. The rationale behind this rule precluding rejections based on combination of teachings from references from non-analogous arts is the realization that an inventor could not possibly be aware of every teaching in every art. Thus, we attempt to more closely approximate the reality of the circumstances surrounding the making of an invention by only presuming knowledge by the inventor of prior art in the field of his endeavor and in analogous arts.

The determination that a reference is from a nonanalogous art is therefore two-fold. First, we decide if the reference is within the field of the inventor's endeavor. If it is not, we proceed to determine whether the reference is reasonably pertinent to the particular problem with which the inventor was involved. *In re Wood*, 202 USPQ 171, 174 (C.C.P.A. 1979)

With regards to Claims 1 and 23, the prior Office Action at page 3 states:

“*Harris* teaches the use of a high density polyethylene composition (column 10 line 14-16) comprising a blend of high molecular weight high density polyethylene and medium molecular weight high density polyethylene (column 7, line 16-24) in the making of a bag (column 4, lines 56-60) for the purpose of making a bag that is suitable for heavy duty applications (column 4, lines 56-60).”

*Harris* is provided for the proposition that it discloses 12-20 wt. % high density, medium molecular weight polyethylene. It does not disclose this range, rather it provides a ratio, which is the inverse of the claimed ratio (35 high density high molecular weight polyethylene:65 high density medium molecular weight polyethylene). The Office Action suggests that *Harris* teaches the selection of the amounts of high molecular weight high density polyethylene depending on the desired application of the end product. *Harris* specifically refers to compositions for “chemical waste storage applications including sanitary sewer piping”. *Harris*

does not provide instruction for making bags, nor would a person have looked to *Harris* “Improved Stress Crack Resistance In Pipe” for instruction on forming melt blends for plastic bags.

*Harris* is drawn to high density polyethylene melt blends for improved stress crack resistance in pipes. *Harris* does not disclose a composition or processes for making bags. The reference to bags at column 4 goes to the quality of the resins i.e. “film grade”. *Harris* simply does not contemplate making plastic bags as suggested in the Office Action. Furthermore, Applicant can see no motivation for looking to a reference for pipes with improved stress crack resistance in order to locate a composition suitable for plastic bags, where cracks are generally not an issue. Thus Harris is not within the field of the inventor's endeavor and not reasonably pertinent to the particular problem with which the inventor was involved.

At the beginning of the first full paragraph of page 3, the Office Action states:

*Williams* teaches a bag (column 3, lines 30-32) comprising 52-68 wt % high density polyethylene and 5-30 Wt % linear low density polyethylene (column 6, lines 12-20)

*Williams* at column 6, lines 12-20 discloses a composition of 65-90 wt % high density polyethylene and 5-30 wt % linear low density polyethylene. Thus the *Williams* reference fails to disclose the claimed weight percentage of high density polyethylene.

With regard to Claim 4 and 26, none of the references disclose the 10-20% recycled material, its properties, or its composition. The argument that because using recycled material is known routine optimization would lead to the claimed composition is impermissible hindsight reasoning. The Examiner must be aware of “the distortion caused by hindsight bias and must be cautious of arguments reliant upon ex post reasoning. See *Graham*, 383 U. S., at 36 (warning against a “temptation to read into the prior art the teachings of the invention in issue” and instructing courts to ““guard against slipping into the use of hindsight””. 127 S. Ct. 1727 (2007).

The compositions disclosed by the cited references are presented in the following table:

INSTANT APPLICATION		WILLIAMS	HARRIS
Plastic Bags		Plastic bags	Pipes
40-48 wt. % e	high density, high molecular weight polyethylene		
12-20 wt. %	high density, medium molecular weight polyethylene		
20-30 wt. %	linear low density polyethylene having a melt index ranging from 0.10-0.30 gm/10 minutes		
0-8 wt. %	color concentrate		
		65-90% wt.	high density polyethylene having a density between about 0.945 and about 0.955 and having a high load melt index between about 5.0 and about 15.0
		5-30% wt.	linear low density polyethylene having a density between about 0.910 and about 0.920 and a melt index between about 0.8 and about 1.2
			bimodal HMW-HDPE
			high density PE

The Harris composition is included for comparison purposes even though, as explained above, comparison is entirely inapposite because Harris concerns only piping and not plastic bags. It is instantly obvious that the compositions in the different documents are entirely different. The instant composition includes three different plastics, while the others contain only two. Further, reading the descriptions of the plastics in their entireties, they are completely different. Finally, the instant invention contains color concentrate while the other compositions do not.

In summary, the references, taken individually, and together simply fail to disclose the limitations that appear in the independent claims of the instant invention.

All of the Claims discussed here depend from Claim 1 or Claim 23, directly or indirectly. As Claims 1 and 23 should be allowable, as discussed *supra*, all claims should likewise be allowable.

### C. Response to Applicant's Arguments

Applicant respectfully submits that this rejection is in error.

1. In the final Office Action, the Examiner stated:

"Applicant argues on page 2 of the remarks dated March 3, 2008, that Harris does not contemplate the making of plastic bags. However, as stated on page 2 of the previous Action, Harris teaches that the use of a composition comprising a blend of high molecular weight high density polyethylene and medium molecular weight high density polyethylene in the making of bags is well known in the art.

Applicant also argues, on page 3 that the reference in Harris to plastic bags speaks to the grade of the film, not a blend of high molecular weight high density polyethylene and medium molecular weight high density polyethylene that is used. However, the reference is specifically directed to the HMW-HDPE resins of the invention.

Applicant also argues, on page 4, that the previous Action incorrectly states that Harris teaches the selection of the amount of high molecular weight high density polyethylene because Harris is directed to piping. However, as stated above, Harris also teaches that that the use of a composition comprising the blends of the invention in the making of bags is well known in the art; the selection of the amount of high molecular weight high density polyethylene in the making of bags is also taught by Harris.”

The cited Office Action at page 3 states:

*Harris* teaches the use of a high density polyethylene composition (column 10 line 14-16) comprising a blend of high molecular weight high density polyethylene and medium molecular weight high density polyethylene (column 7, line 16-24) in the making of a bag (column 4, lines 56-60) for the purpose of making a bag that is suitable for heavy duty applications (column 4, lines 56-60).

The title of the Harris patent is: “HIGH DENSITY POLYETHYLENE MELT BLENDS FOR IMPROVED STRESS CRACK RESISTANCE IN PIPE” (emphasis added). The Abstract states in part: “The invention provides a polyethylene composition … especially useful for manufacture of profile and corrugated pipe and/or pipe fitting applications, and chemical waste applications including sanitary sewer or irrigation piping systems” (emphasis added).” Harris only concerns manufacture of plastic piping and has nothing to do with manufacture of plastic bags.

At column 10, lines 9-20, Harris states:

“The bimodal HMW-HDPE employed in Example 1 was melt blended in a ratio of 35:65 with a copolymer MMWHDPE (Equistar “5502”, Lot LR734) having a NCTL=8.0 hours, by the method described in Example 1. The copolymer MMW-HDPE

had the following properties: MI=0.35, density=0.954 and notched izod=3.0. The properties of the resulting high density polyethylene composition are illustrated in Table 1.

This composition also exhibited properties that meet all the AASHTO specifications for profile and corrugated pipe. In this example, the NCTL property of the composition was a desirable 30 hours (emphasis added)."

At column 7, lines 16-31, Harris states:

"Preferably the bimodal HMW-HDPE and the homopolymer or copolymer MMW-HDPE are melt blended together, for example in an extruder or other mixer (e.g., Banbury, Henschel, and the like), in amounts relative to one another such that the resulting melt-blended, moldable or otherwise formable polyethylene composition has a density of about 0.940 to about 0.960 g/cm<sup>3</sup> and a melt flow index of about 0.1 to about 0.4. However, the density and melt flow index values may vary from these values, depending on the application for which the composition is specified. For pipe and/or pipe fittings, especially for profile and corrugated pipe or combinations of these, the composition preferably has a density of 0.945 to 0.955, a melt flow index of about 0.1 to 0.4 and, more preferably exhibits a minimum flexural modulus of 110,000 psi and a minimum tensile strength of 3,000 psi (emphasis added)."

As can be seen these sections of Harris cited by the Examiner only concern use of polyethylene blends in the manufacture of plastic pipes.

At column 4, lines 56-62, Harris states:

"The bimodal HMW-HDPE resins suitable for use in the invention compositions are considered to be film-grade resins for applications such as T-shirt bags, trash can liners and heavy duty bags. The resins can be virgin resins or can be recycled,

reprocessed or scrap resins that meet the NCTL test requirement of 200 hours or greater for use in the invention compositions.”

This final section of Harris cited by the Examiner only provides characterization of the kinds of bimodal HMW-HDPE resins suitable for use in the Harris invention, which is polyethylene blends suitable for manufacturing plastic pipe. Harris states that the kinds of resins suitable for use in his invention are film-grade resins usually used for manufacturing plastic bags. Again, Harris is not concerned with manufacture of plastic bags. He is only concerned that this type of plastic is used as one component of the blend used in practicing his invention. Harris does not teach the composition of plastic blend used in manufacturing plastic bags.

Thus the Applicant is correct that the reference in Harris to plastic bags speaks to the grade of the film, not a blend of high molecular weight high density polyethylene and medium molecular weight high density polyethylene that is used. Further Applicant is correct that the previous Action incorrectly states that Harris teaches the selection of the amount of high molecular weight high density polyethylene because Harris is directed to piping and does not teach any composition comprising the blends used in the making of bags.

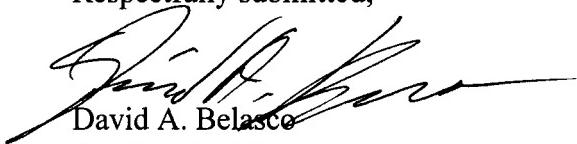
2. The Examiner stated: “Applicant also argues, on page 5, that the statement that one of ordinary skill in the art would have recognized the utility of varying the amount of recycled material to obtain the desired amount of incineration constitutes impermissible hindsight. However, no reason is provided as to why the statement constitutes hindsight.”

Because the Board did not explain the specific understanding or principle within the knowledge of a skilled artisan that would motivate one with no knowledge of Rouffet's invention to make the combination, this court infers that the examiner selected these references with the assistance of hindsight. This court forbids the use of hindsight in the selection of references that comprise the case of obviousness. See *In re Gorman*, 933 F.2d 982, 986, 18 USPQ 2d 1885, 1888 (Fed. Cir. 1991). Lacking a motivation to combine references, the Board did not show a proper *prima facie* case of obviousness. *In re Rouffet*, 47 USPQ 2d 1453, 1458 (Fed. Cir. 1998)

None of the references disclose the 10-20% recycled material, its properties, or its composition. The Examiner provided no explanation for the specific understanding or principle within the knowledge of a skilled artisan that would motivate one with no knowledge of the instant invention to make the combination. Thus the argument that because using recycled material is known routine optimization would lead to the claimed composition is impermissible hindsight reasoning.

Reversal of the Examiner's rejection and early allowance of this application are respectfully requested in view of the above presented remarks. The appropriate fee for filing this document will be paid upon electronic filing.

Respectfully submitted,



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**(8) CLAIMS APPENDIX**

Listing of claims involved in the appeal.

1. A self-opening bag stack comprising:

a plurality of stacked polyethylene film bags comprising about 40-48 wt. % high density, high molecular weight polyethylene, 12-20 wt. % high density, medium molecular weight polyethylene, 20-30 wt. % linear low density polyethylene having a melt index ranging from 0.10-0.30 gm/10 minutes., 0-8 wt. % color concentrate, releasably adhered together in substantial registration; each of said bags including front and rear polyethylene film walls, each of said front and rear walls having first and second side edges, a top edge and a bottom edge; said front and rear walls being integrally joined at their first and second side edges and secured together at their bottom edges and defining an open mouth portion adjacent said top edges; and at least an upper portion of an outer surface of said front and rear walls of each of said bags having been corona treated.

2. The self-opening bag stack, as described in Claim 1, further comprising 0.5 wt. % slip and antiblock compound.
3. The self-opening bag stack, as described in Claim 1, further comprising 1-3 wt. % calcium carbonate.

4. The self-opening bag stack, as described in Claim 1, further comprising 10-20 wt. % recycled material, said recycled material comprising about 40-48 wt. % high density, high molecular weight polyethylene, 12-20 wt. % high density, medium molecular weight polyethylene, 20-30 wt. % linear low density polyethylene, 0-8 wt. % color concentrate.
5. The self-opening bag stack, as described in Claim 1, wherein 10-15 wt. % of said linear low density polyethylene has a density ranging from .923-.924 gm/cc.
6. The self-opening bag stack, as described in Claim 1, wherein 10-15 wt. % of said linear low density polyethylene has a melt index ranging from .25-.30 gm/10 minutes.
7. The self-opening bag stack, as described in Claim 1, wherein said high density, medium molecular weight polyethylene has a density ranging from .937-.947 gm/cc.
9. The self-opening bag stack, as described in Claim 1, further comprising at least one cold staking area piercing and extending transversely through said bag stack for maintaining the bags in said bag stack in substantial registration.
10. The self-opening bag stack, as described in Claim 1, further comprising at least one hot melt pin area piercing and extending transversely through said bag stack for maintaining the bags in said bag stack in substantial registration.

11. The self-opening bag stack, as described in Claim 1, wherein each of said bags includes longitudinally oriented side gussets.

12. The self-opening bag stack, as described in Claim 1, further comprising:  
first and second openings, said first and second openings penetrating and  
extending transversely through said bag stack in an upper portion of the  
bags; and  
said openings being spaced downwardly from said top edge, spaced inwardly  
from said first and second side edges and serving to support said bag  
stack on horizontal arms of a dispensing rack.

13. The self-opening bag stack, as described in Claim 11, wherein each of the bags of the  
bag stack further comprises:  
an upper seam, said upper seam sealing said front wall to said rear wall at their  
respective top edges; and  
a U-shaped cut-out, said U-shaped cut-out being disposed in an upper portion of  
said bag and commencing at a first point along said upper seam spaced  
inwardly from said first side edge and extending to a second point along  
the upper seam spaced inwardly from said second side edge, said cut-out  
extending downwardly toward said bottom edges, thereby forming an  
open mouth portion and a pair of bag handles.

14. The self-opening bag stack, as described in Claim 13, further comprising:
  - first and second openings, said first and second openings penetrating and extending transversely through said bag stack in an upper portion of said bag handles; and
  - said openings being spaced downwardly from said upper seam and serving to support said bag stack on horizontal arms of a dispensing rack.
15. The self-opening bag stack, as described in Claim 13, further comprising at least one cold staking area piercing and extending transversely through said bag stack in said bag handles for maintaining the bags in said bag stack in substantial registration.
16. The self-opening bag stack, as described in Claim 13, further comprising at least one hot melt pin area piercing and extending transversely through said bag stack in said bag handles for maintaining the bags in said bag stack in substantial registration.
17. The self-opening bag stack, as described in Claim 1 or Claim 13, further comprising:
  - a central tab portion connected to said open mouth portion of said bags in said bag stack; and
  - an aperture, said aperture extending transversely through said bag stack within said central tab portion for suspending said bag stack from a dispensing member.

18. The self-opening bag stack, as described in Claim 17, further comprising at least one cold staking area piercing and extending transversely through said bag stack in said central tab portion for maintaining the bags in said bag stack in substantial registration.
19. The self-opening bag stack, as described in Claim 17, further comprising at least one hot melt pin area piercing and extending transversely through said bag stack in said central tab portion for maintaining the bags in said bag stack in substantial registration.
20. The self-opening bag stack, as described in Claim 17, wherein said central tab portion of each bag in said bag stack is detachably connected to said open mouth portion of said bags.
21. The self-opening bag stack, as described in Claim 17, wherein:
  - said central tab portion of each bag in said bag stack includes a frangible section;
  - said frangible section extending from said aperture to an outer edge of said central tab portion; and
  - said frangible portion rupturing upon removal of said bag from said dispensing member.
22. The self-opening bag stack, as described in Claim 1 wherein the degree of corona treatment on said outer surfaces of said front and rear walls of each of said bags is an

amount sufficient to result in a surface tension on said corona treated surface of at least about 38 dynes/cm.

23. A self-opening bag stack of t-shirt type bags comprising:

a plurality of stacked polyethylene film bags comprising about 40-48 wt. % high density, high molecular weight polyethylene, 12-20 wt. % high density, medium molecular weight polyethylene having a melt index ranging from .10-.30 gm/10 minutes, 20-30 wt. % linear low density polyethylene, 0-8 wt. % color concentrate, releasably adhered together in substantial registration;

each of said bags including front and rear polyethylene film walls, each of said front and rear walls having first and second side edges, a top edge and a bottom edge;

said front and rear walls being integrally joined at their first and second side edges and secured together at their bottom edges and defining an open mouth portion adjacent said top edges;

each of said bags comprising laterally spaced upwardly extending bag handles, an open mouth portion between said handles and a central support tab portion extending upwardly from said open mouth portion; and

at least an upper portion of the outer surface of the front and rear walls of each of said bags having been corona treated.

24. The self-opening bag stack, as described in Claim 23, further comprising 0.5 wt. % slip and antiblock compound.
25. The self-opening bag stack, as described in Claim 23, further comprising 1-3 wt. % calcium carbonate.
26. The self-opening bag stack, as described in Claim 23, further comprising 10-20 wt. % recycled material, said recycled material comprising about 40-48 wt. % high density, high molecular weight polyethylene, 12-20 wt. % high density, medium molecular weight polyethylene, 20-30 wt. % linear low density polyethylene, 0-8 wt. % color concentrate.
27. The self-opening bag stack, as described in Claim 23, wherein 10-15 wt. % of said linear low density polyethylene has a density ranging from .923-.924 gm/cc.
28. The self-opening bag stack, as described in Claim 23, wherein 10-15 wt. % of said linear low density polyethylene has a melt index ranging from .25-.30 gm/10 minutes.
29. The self-opening bag stack, as described in Claim 23, wherein said high density, medium molecular weight polyethylene has a density ranging from .937-.947 gm/cc.
31. The self-opening bag stack, as described in Claim 23, further comprising at least one

cold staking area piercing and extending transversely through said bag stack for maintaining the bags in said bag stack in substantial registration.

32. The self-opening bag stack, as described in Claim 23, further comprising at least one hot melt pin area piercing and extending transversely through said bag stack for maintaining the bags in said bag stack in substantial registration.
33. The self-opening bag stack, as described in Claim 23, wherein each of said bags includes longitudinally oriented side gussets.
34. The self-opening bag stack, as described in Claim 23, further comprising:
  - first and second openings, said first and second openings penetrating and extending transversely through said bag stack said bag stack in an upper portion of said bag handles; and
  - said openings being spaced downwardly from said upper seam and serving to support said bag stack on horizontal arms of a dispensing rack.
35. The self-opening bag stack, as described in Claim 23, further comprising at least one cold staking area piercing and extending transversely through said bag stack in said bag handles for maintaining the bags in said bag stack in substantial registration.
36. The self-opening bag stack, as described in Claim 23, further comprising at least one hot

melt pin area piercing and extending transversely through said bag stack in said bag handles for maintaining the bags in said bag stack in substantial registration.

37. The self-opening bag stack, as described in Claim 23, further comprising an aperture, said aperture extending transversely through said bag stack within said central tab portion for suspending said bag stack from a dispensing member.
38. The self-opening bag stack, as described in Claim 23, further comprising at least one cold staking area piercing and extending transversely through said bag stack in said central tab portion for maintaining the bags in said bag stack in substantial registration.
39. The self-opening bag stack, as described in Claim 23, further comprising at least one hot melt pin area piercing and extending transversely through said bag stack in said central tab portion for maintaining the bags in said bag stack in substantial registration.
40. The self-opening bag stack, as described in Claim 23, wherein said central tab portion of each bag in said bag stack is detachably connected to said open mouth portion of said bags.
41. The self-opening bag stack, as described in Claim 23, wherein:  
said central tab portion of each bag in said bag stack includes a frangible section;  
said frangible section extending from said aperture to an outer edge of said central tab portion; and

said frangible portion rupturing upon removal of said bag from said dispensing member.

42. The self-opening bag stack, as described in Claim 23 wherein the degree of corona treatment on said outer surfaces of said front and rear walls of each of said bags is an amount sufficient to result in a surface tension on said corona treated surface of at least about 38 dynes/cm.

**(9) EVIDENCE APPENDIX**

**(10) RELATED PROCEEDINGS APPENDIX**